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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,205	09/24/2003	Kazuya Shimojoh	0717-0517P	1597

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EXAMINER	
LEE, Y MY QUACH	

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,205	SHIMOJOH, KAZUYA	
	Examiner	Art Unit	
	Y Quach Lee	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/24/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 10 to 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1 to 12 are objected to because of the following formalities: In claims 1 and 2, there is no proper cooperation or relationship between "a side" of the light guide plate of claim 2 and "an incident portion" of claim 1 while through them light generated by the light source enters into the element. In claims 1 and 2, there is no proper cooperation or relationship between "a first broad side" of claim 2 and "an emitting portion" of claim 1 while through them the entering light is emitted after traveling through the element. In claims 1 and 9, there is no proper cooperation or relationship between "a buried portion" of claim 9 and "a panel receiving portion" of claim 1. In claims 1 and 9, there is no proper cooperation or relationship between "a side" of claim 9 and "an incident portion" of claim 1 while through them light generated by the light source enters into the element. In claims 1 and 9, there is no proper cooperation or relationship between "a first broad side" of claim 9 and "an emitting portion" of claim 1 while through them the entering light is emitted after traveling through the element. In claim 10, line 2, the "buried portion" provided with a groove is misdescriptive and/or inaccurate. In view of page 39, line 19, the frame 11 is provided with a groove 11c rather than the buried portion is provided with a groove. Claims 3 to 8, 11 and 12 depend on objected claim 1 and as such are also objected. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2 and 6 to 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yuuki et al.

Yuuki et al. show a light source (13) for generating light, an element comprising a light guide plate (11) or a frame (figures 2 to 4) comprising an incident portion such as a side through which light generated by the light source enters into the element and an emitting portion such as a first broad side through which the entering light is emitted after traveling through the element having a shape of a rectangle including four corner portion (figure 2), a rib (9a) provided on at least a portion of a periphery of the element to reinforce the element, a panel receiving portion or a buried portion (the portion receiving the panels such as the light transmissive materials (16, 17, 20)) provided at a portion of the element surrounded by the rib (figure 2), the rib provided in the vicinity of any of the four corner portions (figure 2), at least an additional rib (9b) provided on at least a portion of the periphery of the element, a plurality of ribs (9c and 9d) including the rib and the additional rib provided in the vicinity of two adjacent corner portions of the four corner portions, in the vicinity of two opposing corner portions of the four corner portions, and in the vicinity of the four corner portions (figures 2 to 4).

6. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sagawa.

Sagawa shows a light source for generating light (abstract, line 2, light ...), an element such as a light guide plate or a frame (11, 21, 31) having a buried portion in which a light transmissive material (13, 14 or 15) is buried, the buried portion comprising a side such as an incident portion through which light generated by the light source enters into the element and a first broad side such as an emitting portion through which the entering light is emitted after traveling through the element, a rib (12, 23) provided on at least a portion of a periphery of the element to reinforce the element, and a panel receiving portion, such as the buried portion, provided at a portion of the element surrounded by the rib (figures 1, 2 and 5).

7. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Yuuki et al. and Sagawa.

Yuuki et al. show a liquid crystal panel (20), a back light unit (10) for illuminating the liquid crystal panel and comprising a light source (13) for generating light, an element (11) comprising an incident portion through which light generated by the light source enters into the element and an emitting portion through which the light is emitted after traveling through the element, a rib (9a) provided on at least a portion of a periphery of the element to reinforce the element, and a panel receiving portion (the portion receiving the panels such as the light transmissive materials (16, 17, 20)) provided at a portion of the element surrounded by the rib (figure 2).

Sagawa show a liquid crystal panel (abstract, lines 1 to 2), a back light unit for illuminating the liquid crystal panel and comprising a light source for generating light (abstract, line 2, light ...), an element (11, 21, 31) comprising an incident portion through which light generated by the light source enters into the element and an emitting portion through which the light is emitted after traveling through the element having, a rib (12, 23) provided on at least a portion of a periphery of the element to reinforce the element, and a panel receiving portion (the portion receiving the panels such as the light transmissive materials (13. 14, 15)) provided at a portion of the element surrounded by the rib (figures 1, 2 and 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3, 5, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuki et al. in view of Ozawa.

Yuuki et al. disclose the invention substantially as claimed with the exception of having a groove along at least an edge of the light guide plate or the frame with the light source provided in the groove and a light reflective film.

Ozawa teaches a light guide plate (48) having a groove (80) along at least an edge of the light guide plate and a light source (82) provided in the groove with the light generated by the light source entering through a first side of the groove (right, left or top side of the groove) into the light guide, and a light reflecting film (88) provided on a second side of the groove (the bottom side of the groove) and not on the first side of the groove.

It would have been obvious to one skilled in the art to provide Yuuki et al. with a groove along at least one edge of the light guide plate or the frame and the light source provided in the groove, as shown by Ozawa, so that light generating by the light source directly entering through a first side of the groove into the light guide plate or the frame to avoid external leakage of light from the light source for improving the efficiency of illumination.

10. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuki et al. in view of Haniyu (JP 109931, prior art cited by applicant) and Yu-San.

Yuuki et al. disclose the invention substantially as claimed with the exception of a dot pattern of minute pits and projections on the first broad side and a plurality of grooves arranged in parallel on the second broad side opposed to the first broad side.

Haniyu teaches a dot pattern of minute pits and projections (7) on a first broad side of the light guide plate for diffusing the light distribution of the light guide plate.

Yu-San teaches plurality of grooves (40) arranged in parallel on the second broad side of the light guide plate for enhancing the efficiency and uniformity of the light distribution from the light guide plate.

It would have been obvious to one skilled in the art provide the first broad side of Yuuki et al. with a dot pattern of minute pits and projections, as shown by Haniyu, and the second broad side with a plurality of grooves, as shown by Yu-San, for diffusing and enhancing the uniformity of the light distribution from the light guide plate or the frame.

11. Claims 3, 5, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagawa in view of Yu-San.

Sagawa discloses the invention substantially as claimed with the exception of having a groove along at least an edge of the light guide plate or the frame and the light source provided in the groove and a light reflective film.

Yu-San teaches a groove (18) along at least an edge of the light guide plate or the frame (figures 1 and 2) and a light source (32) provided in the groove with the light generated by the light source entering through a first side of the groove into the light guide plate or the frame, and a light reflecting film (34, column 2, line 60 coating of white paint) provided on a second side of the groove (the bottom side of the groove) and not on the first side of the groove.

It would have been obvious to one skilled in the art to provide Sagawa with a groove along at least one edge of the light guide plate or the frame and the light source provided in the groove, as shown by Yu-San, so that light generating by the light source directly entering through a first side of the groove into the light guide plate or the frame to minimize leakage of light from the light source for improving the efficiency of illumination.

12. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagawa in view of Haniyu (JP 109931, prior art cited by applicant) and Yu-San.

Sagawa discloses the invention substantially as claimed with the exception of a dot pattern of minute pits and projections on the first broad side and a plurality of grooves arranged in parallel on the second broad side opposed to the first broad side.

Haniyu teaches a dot pattern of minute pits and projections (7) on a first broad side of the light guide plate for diffusing the light distribution of the light guide plate.

Yu-San teaches plurality of grooves (40) arranged in parallel on the second broad side of the light guide plate for enhancing the efficiency and uniformity of the light distribution from the light guide plate.

It would have been obvious to one skilled in the art provide the first broad side of Sagawa with a dot pattern of minute pits and projections, as shown by Haniyu, and the second broad side with a plurality of grooves, as shown by Yu-San, for diffusing and enhancing the uniformity of the light distribution of the light guide plate or the frame.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. is cited to show other pertinent liquid crystal display device having a backlight unit for illuminating the liquid crystal display comprising a light guide plate or a frame including

a plurality of rib elements defining a panel receiving or buried portion for receiving a plurality of light transmissive materials or optical panels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y Quach Lee whose telephone number is 571-272-2373. The examiner can normally be reached on Tuesday and Thursday from 8:30 am to 4:30 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service whose telephone number is 571-272-2815.

Y. Q.
May 10, 2005

Y Quach Lee
Patent Examiner
Art Unit 2875